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Do People Support Sin Taxes? A Population Survey of Attitudes

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Abstract

Background: The rising costs of healthcare and the recognition that many chronic diseases are preventable by healthy lifestyles have led to inquiry about economic incentives for modifying behavior. The present work explored people's attitudes towards a differential health insurance premium based on lifestyle.

Methods: A random dial telephone survey of the Israeli population assessed the degree of agreement with a policy of differential taxing on health insurance premium with a discount for individuals maintaining a healthy lifestyle, such as non-smoking or regular exercise.

Results: A majority (66%) of respondents expressed support for a policy of differential taxing. Support was high across all sectors of society, including Arab Israelis (92%), Russians (71%), orthodox religious individuals (78%), persons with low education (72%) or low income (69%), smokers (51%), and sedentary people (65%).

Conclusion: A large majority of the population supports differential health insurance premiums according to lifestyle.

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Abstract in Hebrew תקציר

רקע

העלויות הגוברות של הטיפול הרפואי וההכרה שמחלות כרוניות רבות ניתנות למניעה באמצעות אורח חיים בריא הביאו לחקר אודות תמריצים כלכליים לשינוי התנהגויות. העבודה הנוכחית חקרה גישות הציבור כלפי מס בריאות מדורג המבוסס על אורח חיים.

שיטות

סקר טלפוני אקראי של האוכלוסייה בישראל העריך את מידת ההסכמה לגבי מדיניות מס בריאות מדורג בו ניתנת הנחה לאנשים המנהלים אורח חיים בריא, כגון אי עישון או פעילות גופנית סדירה.

תוצאות

מרבית המשיבים (66%) הביעו תמיכה במדיניות מיסוי הדרגתי. התמיכה הייתה גבוהה בקרב כל המגזרים בחברה, כולל ערבים ישראליים (92%), רוסים (71%), דתיים (78%), בעלי השכלה נמוכה (72%) בעלי הכנסה נמוכה (69%) מעשנים (51%) ואנשים שאינם עוסקים בפעילות גופנית סדירה (65%).

מסקנות

הרוב הגדול של האוכלוסייה תומך במס בריאות מדורג בו דמי הביטוח הנם בהתאם לאורח החיים.

Keywords: sin taxes, lifestyle, health insurance premium, smoking, exercise

Author Notes: The authors have no conflicts of interest to declare. No external funding was required for this study. The surveys are approved by IRB of Hadassah Hebrew University Medical Center #1-20/05/01. Corresponding author: Mayer Brezis, MD, MPH, Professor of Medicine, Director, Center for Clinical Quality & Safety, Hadassah Hebrew University Medical Center, Jerusalem, Israel. Tel.: +972-2-677-7110; Fax: +972-2-643-9730. E-mail: brezis@vms.huji.ac.il.

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Introduction

Many chronic diseases are preventable by healthy lifestyle activities such as regular exercise and abstention from smoking (Mokdad et al. 2004). More than a quarter of the rise in U.S. healthcare spending over the past 15 years has been attributed to modifiable risk factors (Thorpe et al. 2005). Public health experts and economists now suggest that patient-targeted incentives may help contain costs (Sindelar 2008; Volpp et al. 2009). "Sin taxes" have been defined as taxes levied on harmful behavior or products such as cigarettes, and a variety of financial positive incentives have recently been shown to help smoking cessation (Volpp et al. 2009) and weight loss (Volpp et al. 2008). Previous research on these taxes and subsidies has focused on questions of economic efficiency, social justice, ethical fairness, discrimination, and legality (Aronsson and Thunstrom 2006; Mello and Rosenthal 2008; O'Donoghue and Rabin 2006). Many employers believe that healthcare costs would be reduced by having employees adopt healthier lifestyles (Mello and Rosenthal 2008), but little is known about people's preferences on these issues. The present survey was conducted to evaluate people's attitudes towards differential health insurance premiums based on lifestyle in the general public.

Methods

The design was a cross-sectional telephone survey using random dial sampling from the population in Israel, as part of an ongoing monthly survey administered by the Cohen Institute for Public Opinion Research. This academic institute is affiliated with the faculty of the Social Sciences at Tel Aviv University and represents Israel in large-scale projects such as the European Social Survey and the International Social Survey Program. After exclusions due to incorrect or disconnected phone numbers, busy signals or answering machines in three attempts (699), refusals (952), and other non-suitable respondents such as below age 18 (164), 578 adults were selected (response rate, 30%). The questionnaire used close-ended questions about demographic and socioeconomic variables (gender, age, familial status, education, income, occupation, ethnicity, and faith), lifestyle habits (smoking and exercise), and attitudes towards discounting health insurance taxes for individuals who maintain healthy habits, as shown in Table 1. For this question, formal pre-testing was carried out on 15 people during face-to-face interviews to verify understanding using an at-face validity and to refine

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the formulation of the question until no further comments arose indicative of ambiguity. The questions were translated into Arabic and Russian and were pre-tested again; the survey was conducted in Russian or Arabic in 125 instances. Data are presented as frequencies and percentage. A chi square test was applied to compare subpopulations. An attempt was made to predict attitude by respondents' characteristics using a multivariate logistic regression. Analysis used SPSS Inc. software v. 15 (Chicago, Illinois). The study was approved by the Ethics Committee of our Faculty of Medicine.

Table 1. Main question of the survey

Habits such as smoking and lack of exercise affect health and may cause many diseases, such as heart attacks and cancer. The cost of treatment for these diseases is covered by health insurance taxes. *People with healthy habits, such as exercise and abstention from smoking, are less likely to become ill and therefore are less costly to the healthcare system.* Are you in favor of or against an arrangement of discounting health insurance taxes for individuals who keep healthy habits, such as exercise and abstention from smoking?
Possible answers: *Strongly in favor of discounting* *Somewhat in favor of discounting* *In the middle: not against and not in favor* (indifferent) *Somewhat against discounting* *Strongly against discounting* *I don't know or I have no opinion**

* Surveyors were instructed to not actively probe for this answer

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Results

Table 2 shows the characteristics of the respondents, which resemble those of the general population in the country.

Table 2. Characteristics of respondents

Variable	n (%)	Israel census data (%)**
Age (years)		
18-39	227 (39.3)	44.7
40-64	205 (35.5)	33.6
Above 65	70 (12.5)	12.1
Gender		
Female	289 (50.0)	51.2
Male	289 (50.0)	48.8
Education (years)		
Less than 8	101 (17.5)	13.1
Between 8 and 12	348 (60.3)	46.5
Over 12	127 (22.0)	40.3
Income (relative to average)		
Lower than average	259 (44.9)	50
Equal to average	113 (19.6)	20
Higher than average	133 (23.1)	30
Ethnicity		
Israeli	448 (77.6)	78.7
Arab	72 (12.5)	13.2
Russian	57 (9.9)	12.3
Relationship to faith		
Non-religious	232 (40.1)	50
Traditional	161 (27.9)	43.7
Orthodox	59 (10.2)	5.5
Extreme orthodox	32 (5.5)	
Habits		
Current smokers	135 (23.4)	23.8
Sedentary*	251 (43.5)	NA

* Less than 3 hours per week of exercise. ** Available data from www.cbs.gov.il (some variables have a different operational definition). NA, not available from census data

Table 3 shows the distribution of responses to the main question of the survey. A majority (66%) of respondents expressed support for a policy of differential taxing according to lifestyle. Of note, most people had a strong feeling either against or in favor of such policy, with only a minority

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being undecided. For simplification, in the following presentation of results, categories of the answers *Strongly* and *Somewhat* have been merged.

Table 3. Distribution of responses to the main question of the survey:
***Are you in favor of or against an arrangement of discounting health insurance taxes for individuals who keep healthy habits, such as exercise and abstention from smoking*?**

Response	n (%)
Strongly in favor of discounting	293 (50.7)
Somewhat in favor of discounting	88 (15.2)
Indifferent	51 (8.8)
Somewhat against discounting	29 (5)
Strongly against discounting	102 (17.6)
I don't know or I have no opinion	15 (2.6)

Table 4 shows the distribution of responses on the main question of the survey according to habits and selected socio-demographic characteristics. Support for a discount policy was high across all sectors of society and appeared especially high among Arab Israelis (92%) and orthodox religious individuals (78%). Among smokers and sedentary people, respectively 50% and 65% supported a discount policy. Degree of support appeared to be unaffected by gender, age, familial status, income, or occupation. The proportion of respondents opposing a discount policy was higher among smokers (35% vs. 19% in non-smokers, $p<0.001$) and individuals with highest vs. lower education (27% vs. 17%, respectively, $p=0.06$).

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Table 4. Distribution of responses for selected subpopulations

Group (N)	Response* (%)				Statistical significance p (chi square, df)
	In favor of discounting	*Indifferent*	*Against discounting*	*No opinion*	
Overall sample (578)	66	9	23	2	
Current smokers (135)	50	13	35	2	Vs. non-smokers p<0.001 (22.7, 3)
Sedentary (251)	65	10	21	4	
Lower income (259)	69	9	18	4	
Lower education (101)	72	6	17	5	Vs. other levels of education p=0.056 (12.3, 6)
Orthodox religious (Jews) (59)	80	8	12	0	Vs. other levels of religiosity p=0.019 (19.8, 9)
Arab Israelis (72)	92	3	3	3	Vs. other Israelis p<0.001 (28.4, 6)
Russians (57)	68	5	23	4	

*Answers were regrouped to ease analysis and presentation (*In favor* includes both *Strongly* and *Somewhat in favor*; *Against* includes both *Strongly* and *Somewhat against discounting*)

A multivariate logistic regression, to predict opinion from respondents' socio-demographic characteristics, showed that only current smoking status and religiosity significantly predicted attitude respectively against or in favor of differential taxing. For smoking, B was –0.746 (Wald 5.931, df 1) with Exp(B)=0.474, 95%CI 0.260–0.865 (p=0.015). For religiosity, B was +0.433 (Wald 5.822, df 1) with Exp(B)=1.541, 95%CI 1.085–2.191 (p=0.016). Education, income, ethnicity, age, gender, and sedentary status failed to reach statistical significance.

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Discussion

Main Finding of This Study

The current survey shows that a large majority of the population would support differential health insurance taxing according to lifestyle. Support for a discount policy was high across all sectors of society and appeared especially high among Arab Israelis and orthodox religious individuals. Even smokers and sedentary people supported a policy of discount for healthy habits they did not have. In fact, in no subgroup could we find a majority against differential taxing.

What is Already Known on This Topic

Unhealthy habits, leading causes of morbidity, impose a large toll on the healthcare budget. Targeting lifestyle for optimization of health insurance efficiency has recently attracted health economists (Sindelar 2008; Volpp et al. 2009). Behavioral economics (Ariely 2008) show that individuals often make irrational decisions for their own health, with disproportionate emphasis on immediate gratification, such as the pleasure of eating or smoking. Meanwhile, individuals may well respond to minor but immediate monetary rewards: indeed, recent work shows that small financial incentives significantly increased the rates of smoking cessation (Volpp et al. 2009) and appear effective in inducing short-term weight loss (Volpp et al. 2008). More research appears to be needed to better understand long-term efficacy, types of modalities, cost-effectiveness, and acceptability of these economic tools.

What This Study Adds

The present work was done to explore public acceptability for the general concept of differential taxing based on health behavior. According to this survey, people appear to accept the notion that healthcare taxes should be lower for individuals who have adopted a healthy lifestyle, similar to how car insurance premiums are lower for drivers with no accidents.

Limitations of This Study

The limitations of our study are multiple. The response rate was low, but not unlike other reports of this type (McCarty et al. 2006). The characteristics of

the respondents shown in Table 2, resembling those of the Israeli population, suggest representativeness of the sample. It may be difficult to generalize findings from one country to another, but our population is multicultural and probably not too different from other Western countries. The questions about lifestyle were validated by face validity, the lowest level of validity.

High support for differential taxing might derive from the framing of our main question. We formulated the question in a remunerative way (discount for good behavior) rather than in a punitive way (increased tax for bad behavior). Discounts may send the wrong message that healthy habits are expected to be the exception rather than the norm; on the other hand, a sin tax has a connotation of being an intrusive penalty that limits freedom. Ultimately, the two approaches are financially equivalent and the issue of framing is perhaps mostly semantic. We preferred to avoid a neutral wording in the question, such as "differential taxing," that might have been too abstract for individuals with lower education.

Of note, individuals with highest education appeared more reluctant to differential taxing, perhaps because they are aware of the potential regressive nature of sin taxes (Remler 2004). To determine how socio-demographic characteristics affect preference, while many of these variables are positively or negatively correlated (such as low education, low income, and smoking), a multivariable regression showed only smoking status and religiosity to significantly predict attitude respectively against or in favor of differential taxing.

Our survey did not address questions of efficiency, fairness, and legality of differential taxing. It may be possible, under careful conditions, to design efficient, ethical, and legally compliant tax incentives (Aronsson and Thunstrom 2006; Mello and Rosenthal 2008; O'Donoghue and Rabin 2006). We also did not address the question of how to implement differential taxing for smokers or sedentary people. Discounts could be offered to individuals after signing a statement that they regularly exercise and refrain from smoking and agree to be randomly tested and penalized if found to be deceptive (testing may use cotinine levels and a pedometer mounted on an electronic handcuff). A recent survey in the United States asked people waiting in primary care clinics for their opinions regarding "pay for performance for patients (Long, Helweg-Larsen, and Volpp 2008)." Only about 40% thought it was a good idea to pay smokers to quit smoking or obese people to lose weight while over 40% thought it was a bad idea. Yet, 67% of patients favored the idea of charging non-smokers less for health insurance and a majority thought insurance should offer incentives to reward healthy behavior (although exercise was not specified in the survey). So, while done in a different country and different setting, the general public

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appears to accept the notion of differential taxing for healthcare insurance. Since behavior-based differential taxing raises difficult ethical and social issues, a participatory approach asking people's opinion may be more useful than assuming in a paternalistic manner that only experts know (Guttman et al. 2008).

Conclusion and Policy Implication

Our observation suggests that the general public would support discounting health insurance for people holding a healthy lifestyle. The proper ethical, legal, and administrative framework for differential taxing might be useful to explore in future planning. Implementation of such a policy would require careful monitoring for unintended consequences.

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